| AGE RANGE (circa Million Years) | AGE (circa Million Years) | EON | ERA | PERIOD | PERIOD RANGE | HYPOTHETIC | EVENT | NAME | CAUSE | NOTES | THEME | REFERENCE | SPECIFIC | IMPORTANCE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Pre-RNA World | Premier RiboNucleic Acid | | | Biology | | | |
| | | | | | | | RNA World | RiboNucleic Acid | | | Biology | | | |
| | | | | | | | Pre-LUCA | Premier Last Universal Common Ancestor | | | Biology | | | |
| 4000 | -4000 | Hadean | - | - | - | | LUCA | Last Universal Common Ancestor | | | Biology | | | |
| 3850 – 2450 | -3850 | Archean | - | - | | | GOE | Great Oxidation Event | | The Earth's atmosphere and the shallow ocea | Biology | | | |
| 3636 – 2803 | -3600 | Archean | Eoarchean | - | | X | Supercontinent | Vaalbara | | | Geology | | | |
| 3500 – 2400 | -3500 | Archean | Paleoarchean | - | | X | Purple Earth hypothesis | | | | Biology | | | |
| 3500 – 3200 | -3400 | Archean | Paleoarchean | - | | | Photosynthesis | | | | Biology | Des Marais, D.J. 2000. Evolution | | |
| 2803 – 2408 | -2800 | Archean | Mesoarchean | - | | X | Supercontinent | Ur | | | Geology | | | |
| 2720 – 2114 | -2720 | Archean | Neoarchean | - | | X | Supercontinent | Kenorland | | | Geology | | | |
| 1900 – 1100 | -1900 | Proterozoic | Paleoproterozoic | Orosirian | | | LECA | Last Eukaryotic Common Ancestor | | Ancestor to all eukaryotes, connected with Asg | Biology | Eme, L.; Spang, A.; Lombard, J.; | | |
| 1820 – 1350 | -1820 | Proterozoic | Paleoproterozoic | Statherian | | X | Supercontinent | Columbia | | | Geology | | | |
| 1130 – 750 | -1130 | Proterozoic | Mesoproterozoic | Stenian | | | Supercontinent | Rodinia | | | Geology | | | |
| 700 | -700 | Proterozoic | Neoproterozoic | Tonian | | X | First Appearance Myxogastria | Myxomycetes | | | Biology | | | |
| 650 | -650 | Proterozoic | Neoproterozoic | Cryogenian | | X | Snowball Earth | Sturtian Glaciation | | | Geology | | | |
| 650 – 632 | -650 | Proterozoic | Neoproterozoic | Cryogenian | | X | Snowball Earth | Marionan Glaciation | | 650 to 632,3 ± 5,9 Million Years | Geology | Rooney, Alan D.; Strauss, Justin | | |
| 521 | -521 | Phanerozoic | Paleozoic | Cambrian | | | First Appearance Trilobita | | | | Biology | | | |
| 509 | 509 | Phanerozoic | Paleozoic | Cambrian | | | First Appearance Conodonta | | | | Biology | | | |
| 450 – 440 | -450 | Phanerozoic | Paleozoic | Ordovician | Ordovician– | | Extinction | | | | Biology | | | |
| 409 | -409 | Phanerozoic | Paleozoic | Devonian | | | First Appearance Ammonoidea | | | | Biology | | | |
| 375 – 360 | -375 | Phanerozoic | Paleozoic | Devonian | Devonian–C | | Extinction | | | | Biology | | | |
| 336 – 175 | -336 | Phanerozoic | Paleozoic | Carboniferous | | | Supercontinent | Pangaea | | | Geology | | | |
| 265 | -265 | Phanerozoic | Paleozoic | Permian | Permian | | First Apperance Gorgonopsia | | | | Biology | | | |
| 252 | -252 | Phanerozoic | Paleozoic | Permian | Permian | | Extinction | Permian Extinction | | | Biology | | | |
| 250 – 66 | -250 | Phanerozoic | Mesozoic | Triassic | | | First Appearance Icthyosauria | | | | Biology | | | M |
| ? 240 | -240 | Phanerozoic | Mesozoic | Triassic | | | First Appearance Diptera | MOSCONAS! | | To be confirmed the RANGE date | Biology | Yeates, D. 2003. Phylogeny of tr | | |
| 234 – 232 | -234 | Phanerozoic | Mesozoic | Triassic | | | CPE | Carnian Pluvial Episode | | It rained for nearly two million years. Of course | Meteorology | | | |
| 233 – 66 | -233 | Phanerozoic | Mesozoic | Triassic | | | First Appearance Dinosauria | | | | Biology | | | |
| ? 228 | -228 | Phanerozoic | Mesozoic | Triassic | | | First Appearance Pterosauria | | | They went extinct with the C-P event | Biology | | | |
| 203 – 66 | -203 | Phanerozoic | Mesozoic | Triassic | | | First Appearance Plesiosauria | | | | Biology | | | M |
| 201,3 | -201.3 | Phanerozoic | Mesozoic | Triassic | Triassic–Jura | | Extinction | | | | Biology | | | |
| 201 | -201 | Phanerozoic | Mesozoic | Jurassic | | | First Appearance Hymenoptera - Wasps | | | Closely connected with Orussoidea wasps | Biology | | | |
| 101 – 66 | -101 | Phanerozoic | Mesozoic | Cretaceous | | | First Appearance Mosasauria | | | | Biology | | | M |
| 100 | -100 | Phanerozoic | Mesozoic | Cretaceous | | | First Appearance Hymenoptera - Formicidae | | | Evolved from a lineage within the stinging wasp | Biology | | | |
| 100 | -100 | Phanerozoic | Mesozoic | Cretaceous | | | First Appearance Hymenoptera - Bees | | | Immediate ancestors of bees were stinging wa | Biology | | | |
| 66 – 65 | -66 | Phanerozoic | Paleozoic | Cretaceous | Cretaceous ( | | Extinction | KPg Extinction | | | Biology | | | |
| 55 | -55 | Phanerozoic | Cenozoic | Paleogene | Paleogene | | PETM | Paleocene-Eocene thermal maximum | | The average sea surface temperature (SST) rea | Meteorology | | | |
| 7 – 6 | -7 | Phanerozoic | Cenozoic | Quaternary | | | First Appearance Sahelanthropus tchadensis | Human evolution | | Possible Common Ancestor Humans and Mon | Biology | | | |
| 6.1 | -6 | Phanerozoic | Cenozoic | Quaternary | | | First Appearance Orrorin tugenensis | Human evolution | | | Biology | | | |
| 6 | -6 | Phanerozoic | Cenozoic | Quaternary | | | Extinction Sahelanthropus tchadensis | Human evolution | | | Biology | | | |
| 4.2 | -4.2 | Phanerozoic | Cenozoic | Quaternary | | | Extinction Orrorin tugenensis | Human evolution | | | Biology | | | |
| 1.8 | -1.8 | Phanerozoic | Cenozoic | Quaternary | | | First Appearance of the first Homo in the Iberian | Human evolution | | | Biology | | | |
| 0.335 | -0.335 | Phanerozoic | Cenozoic | Quaternary | | | First Appearance Homo naledi | Human evolution | | | Biology | | | |
| 0.430 | -0.430 | Phanerozoic | Cenozoic | Quaternary | | | First Appearance Homo neanderthalensis | Human evolution | | | Biology | | | |
| 0.300 - ? | -0.300 | Phanerozoic | Cenozoic | Quaternary | | | First Appearance Homo sapiens | | | | Biology | | | |
| 0.236 | -0.236 | Phanerozoic | Cenozoic | Quaternary | | | Extinction Homo naledi | Human evolution | | | Biology | | | |
| 0.190 | -0.190 | Phanerozoic | Cenozoic | Quaternary | | | First Appearance Homo floresiensis | Human evolution | | | Biology | | | |
| 0.04 | -0.040 | Phanerozoic | Cenozoic | Quaternary | | | Extinction Homo neanderthalensis | Human evolution | | | Biology | | | |
| NOW | 0 | Phanerozoic | Cenozoic | Quaternary | | | Extinction Homo sapiens in 200 years to 5000 ye | Human evolution | Antropogenic | Sixth extinction on the way with a deep decrea | Biology | | | |
| NOW | 0 | Phanerozoic | Cenozoic | Quaternary | | | Suduction plate starts to form along the Gibraltar | | | Atlantic Ocean starts to close | Geology | | | |
| +200 | 200 | - | - | - | - | X | Supercontinent | Amasia | | | Geology | | | |
| +200 | 200 | - | - | - | - | | Supercontinent | Novopangaea | | Most probable scenario | Geology | | | |
| +200 | 200 | - | - | - | - | X | Supercontinent | Pangea Ultima | | | Geology | | | |
| +200 | 200 | - | - | - | - | X | Supercontinent | Aurica | | | Geology | | | |
| +2500 | 2500 | | - | - | - | | Collision of Milky Way and Andromeda Galaxy | | | | Astronomy | | | |
| +4500 | 4500 | - | - | - | - | X | Planetary ring on Earth | | | | Astronomy | | | |
| +5000 | 5000 | - | - | - | - | | Planetary Nebula of the Sun | | | | Astronomy | | | |
| +7000 | 7000 | - | - | - | - | | White Dwarf of the Sun | | | | Astronomy | | | |
| +7000 – 5000 | 7000 | - | - | - | - | X | Possible destruction of Earth | | | | Astronomy | | | |
| +10^9 | 10^9 | - | - | - | - | X | Black Dwarf of the Sun | | | | Astronomy | | | |
| +10^57 | 10^57 | - | - | - | - | | Death of the Sun | | | | Astronomy | | | |
| | | | | | - | | Younger Dryas | | | | Meteorology | | | |
| +50000 | 50000 | | | | | X | Earth and Moon both locked | | | | Astronomy | | | |
| +65000 | 65000 | | | | | X | Moon collision with Earth | | | | Astronomy | | | |
| | (10^100)^56 years | | | | | X | New inflationary event | | | Quantum tunnelling in any isolated patch of the | | | | |

| EON | ERA | PERIOD | THEME |
|---|---|---|---|
| - | - | - | - |
| Archean | Cenozoic | Calymmian | Astronomy |
| Hadean | Eoarchean | Cambrian | Biology |
| Phanerozoic | Mesoarchean | Carboniferous | Geology |
| Proterozoic | Mesoproterozoic | Cretaceous | Meteorology |
|  | Mesozoic | Cryogenian |  |
|  | Neoarchean | Devonian |  |
|  | Neoproterozoic | Ectasian |  |
|  | Paleoarchean | Ediacaran |  |
|  | Paleoproterozoic | Jurassic |  |
|  | Paleozoic | Neogene |  |
|  |  | Ordovician |  |
|  |  | Orosirian |  |
|  |  | Paleogene |  |
|  |  | Permian |  |
|  |  | Quaternary |  |
|  |  | Rhyacian |  |
|  |  | Siderian |  |
|  |  | Silurian |  |
|  |  | Statherian |  |
|  |  | Stenian |  |
|  |  | Tonian |  |
|  |  | Triassic |  |

| Name | Time Span | Etymology of name |
|---|---|---|
| Phanerozoic | 538,8 to 0 million years ago | From the Greek words φανερός (phanerós) meaning 'visible' or 'abundant', and ζωή (zoē) meaning 'life'. |
| Proterozoic | 2500 to 538,8 million years ago | From the Greek words πρότερος (próteros) meaning 'former' or 'earlier', and ζωή (zoē) meaning 'life'. |
| Archean | 4000 to 2500 million years ago | From the Greek word αρχή (archē), meaning 'beginning, origin'. |
| Hadean | ~4600 to 4000 million years ago | From Hades, Greek: ᾍδης, translit. Háidēs, the god of the underworld (the hell, the inferno) in the Greek mythology. |

| Name | Time Span | Etymology of name |
|---|---|---|
| Cenozoic | 66 to 0 million years ago | From the Greek words καινός (kainós) meaning 'new', and ζωή (zōḗ) meaning 'life'. |
| Mesozoic | 251,9 to 66 million years ago | From the Greek words μέσο (méso) meaning 'middle', and ζωή (zōḗ) meaning 'life'. |
| Paleozoic | 538,8 to 251,9 million years ago | From the Greek words παλιός (palaiós) meaning 'old', and ζωή (zōḗ) meaning 'life'. |
| Neoproterozoic | 1000 to 538,8 million years ago | From the Greek words νέος (néos) meaning 'new' or 'young', πρότερος (próteros) meaning 'former' or 'earlier', and ζωή (zōḗ) meaning 'life'. |
| Mesoproterozoic | 1600 to 1000 million years ago | From the Greek words μέσο (méso) meaning 'middle', πρότερος (próteros) meaning 'former' or 'earlier', and ζωή (zōḗ) meaning 'life'. |
| Paleoproterozoic | 2500 to 1600 million years ago | From the Greek words παλιός (palaiós) meaning 'old', πρότερος (próteros) meaning 'former' or 'earlier', and ζωή (zōḗ) meaning 'life'. |
| Neoarchean | 2800 to 2500 million years ago | From the Greek words νέος (néos) meaning 'new' or 'young', and ἀρχαῖος (arkhaîos) meaning 'ancient'. |
| Mesoarchean | 3200 to 2800 million years ago | From the Greek words μέσο (méso) meaning 'middle', and ἀρχαῖος (arkhaîos) meaning 'ancient'. |
| Paleoarchean | 3600 to 3200 million years ago | From the Greek words παλιός (palaiós) meaning 'old', and ἀρχαῖος (arkhaîos) meaning 'ancient'. |
| Eoarchean | 4000 to 3600 million years ago | |

| Name | Time Span | Etymology of name |
|---|---|---|
| Quaternary | 2,6 to 0 million years ago | First introduced by Jules Desnoyers in 1829 for sediments in France's Seine Basin that appeared to be younger than Tertiary rocks. |
| Neogene | 23 to 2,6 million years ago | Derived from the Greek words νέος (néos) meaning 'new', and γενεά (geneá) meaining 'genesis' or 'birth'. |
| Paleogene | 66 to 23 million years ago | Derived from the Greek words παλιός (palaiós) meaning 'old', and γενεά (geneá) meaining 'genesis' or 'birth'. |
| Cretaceous | 145 to 66 million years ago | Derived from Terrain Crétacé used in 1822 by Jean d'Omalius d'Halloy in reference to extensive beds of chalk within the Paris Basin. Ultimately derived from the Latin crēta meaning (chalk). |
| Jurassic | 201,3 to 145 million years ago | Named after the Jura Mountains. Originally used by Alexander von Humboldt as 'Jura Kalkstein' (Jura limestone) in 1799. Alexandre Brongniart was the first to publish the term Jurassic in 1829. |
| Triassic | 251,9 to 201,3 million years ago | From the Trias of Friedrich August von Alberti in reference to a trio of formations widespread in southern Germany. |
| Permian | 298,9 to 251,9 million years ago | Named after the historical region of Perm, Russian Empire. |
| Carboniferous | 358,9 to 298,9 million years ago | Means 'coal-bearing', from the Latin carbō (coal) and ferō (to bear, carry). |
| Devonian | 419,2 to 358,9 million years ago | Named after Devon, England. |
| Silurian | 443,8 to 419,2 million years ago | Named after the Celtic tribe, the Silures. |
| Ordovician | 485,4 to 443,8 million years ago | Named after the Celtic tribe, Ordovices. |
| Cambrian | 538,8 to 485,4 million years ago | Named for Cambria, a latinised form of the Welsh name for Wales, Cymru. |
| Ediacaran | 635 to 538,8 million years ago | Named for the Ediacara Hills. Ediacara is possibly a corruption of the Kuyani words 'Yata Takarra' meaning hard or stony ground. |
| Cryogenian | 720 to 635 million years ago | From the Greek words κρύος (krýos) meaning 'cold', and, γένεσις (génesis) meaning 'birth'. |
| Tonian | 1000 to 720 million years ago | From the Greek word τόνος (tónos) meaning 'stretch'. |
| Stenian | 1200 to 1000 million years ago | From the Greek word στενός (stenós) meaning 'narrow'. |
| Ectasian | 1400 to 1200 million years ago | From the Greek word ἔκτᾰσῐς (éktasis) meaning 'extension'. |
| Calymmian | 1600 to 1400 million years ago | From the Greek word κάλυμμᾰ (kálumma) meaning 'cover'. |
| Statherian | 1800 to 1600 million years ago | From the Greek word σταθερός (statherós) meaning 'stable'. |
| Orosirian | 2050 to 1800 million years ago | From the Greek word ὀροσειρά (oroseirá) meaning 'mountain range'. |
| Rhyacian | 2300 to 2050 million years ago | From the Greek word ῥύαξ (rhýax) meaning 'stream of lava'. |
| Siderian | 2500 to 2300 million years ago | From the Greek word σίδηρος (sídēros) meaning 'iron'. |

todas as estrelas da nossa galáxia (e os respectivos sistemas planetários) orbitam o núcleo da galáxia (centro de massa). No caso do Sol, a órbita tem uma periodicidade de ~250 milhões de anos. Com os seus 4.5 mil milhões de anos, o Sol atravessou várias vezes os braços espirais e zonas entre os braços. Os b